



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Scott Parkhill et al.
Application No. : 09/957,047
Filed : September 20, 2001
For : PRESS (NON-SOLDERED) CONTACTS FOR HIGH CURRENT
ELECTRICAL CONNECTIONS IN POWER MODULES

Examiner : Hae M. Hyeon
Art Unit : 2839
Docket No. : 130209.433
Date : August 6, 2003

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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RESPONSE TO RESTRICTION REQUIREMENT

Commissioner for Patents:

In response to the Restriction Requirement dated July 11, 2003, Applicants hereby elect the structure of Figure 9 with traverse, for examination at this time. Consideration of the claims reading on Figure 9 is now requested, in light of the following remarks traversing the Examiner's restriction requirement.

Restriction Can Be Proper In Limited Circumstances.

An application may properly be restricted to one of two or more claimed inventions if they are able to support separate patents and they are either *independent* or *distinct*. If a search and examination of an entire application can be made *without serious burden*, the Examiner *must* examine it on the merits, even though it includes claims to independent or distinct inventions. MPEP 803. In referring to practice under 35 U.S.C. 121, the MPEP notes "it becomes very important that the practice under this section be carefully administered," and goes on to state "IT STILL REMAINS IMPORTANT FROM THE STANDPOINT OF THE PUBLIC INTEREST THAT NO REQUIREMENTS BE MADE

WHICH MIGHT RESULT IN THE ISSUANCE OF TWO PATENTS FOR THE SAME INVENTION.” MPEP 803.01 (Emphasis in original). The concern is that the public should be able to rely on the assumption that upon expiration, the public will be free to use not only the invention claimed in the patent, but also modifications and variants thereof. MPEP 804.

Claims Are Not Independent

The term “*independent*” means that there is no disclosed relationship between the two or more subjects disclosed, that is they are unconnected in design, operation, or effect. MPEP 802.01. Each of the claims is generally directed to compliant electrical coupling structures. Thus, the claims are *not* independent.

Claims Are Not Distinct

The term “*distinct*” means that two or more subjects as disclosed are related, but are capable of separate manufacture, use, sale as claimed, AND ARE PATENTABLE (novel and unobvious) OVER EACH OTHER (though they may each be unpatentable because of the prior art). MPEP 802.01 (Emphasis in original).

Structure of Figures 9, 11 and 19 Are Not Distinct

Figures 9 and 11 illustrate an embodiment of a compliant electrical coupling structure in an environment of a power module. Figure 19 illustrates the *identical* compliant electrical coupling structure without the surrounding environment of the power module in the interest of clarity of the illustration. The omission of elements from a drawing to improve the clarity of the illustration does *not* constitute a distinct invention. The structure of Figure 19 is thus *not* distinct from the structure of Figures 9 and 11.

The Examiner contends that there is no generic claim. Applicants respectfully disagree.

Claim 1 is Generic

Claim 1 is generic. Claim 1 recites a conductive element comprising “a first end portion for forming an electrical connection with a substrate; a second end portion; and a compliant portion, deformable between a compressed position and a decompressed position,

wherein, when the compliant portion is in the compressed position, the first end portion is biased into physical engagement with the substrate to form an electrical connection with the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection."

Figures 9, 11 and 19 show a conductive element comprising a first end portion for forming an electrical connection with a substrate, a second end portion, and a compliant portion, deformable between a compressed position and a decompressed position, wherein, when the compliant portion is in the compressed position, the first end portion is biased into physical engagement with the substrate to form an electrical connection with the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection.

Likewise, Figure 10 shows a conductive element comprising a first end portion for forming an electrical connection with a substrate, a second end portion, and a compliant portion, deformable between a compressed position and a decompressed position, wherein, when the compliant portion is in the compressed position, the first end portion is biased into physical engagement with the substrate to form an electrical connection with the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection.

Specifically, Figure 20 also shows a conductive element comprising a first end portion for forming an electrical connection with a substrate, a second end portion, and a compliant portion, deformable between a compressed position and a decompressed position. While Figure 20 does not specifically illustrate that "the first end portion is biased into physical engagement with the substrate to form an electrical connection with the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection," that is because Figure 20 illustrates only the conductive element, with the other structure of Figures 9-11 omitted for the sake of clarity of illustration. As discussed in the application, the embodiment of Figure 20 is for use in making electrical connections to at least one substrate, such as in the power module illustrated in Figures 9-11. Thus, claim 1 clearly reads on the embodiment of Figure 20.

Likewise, Figures 21 and 22 also show a conductive element comprising a first end portion for forming an electrical connection with a substrate, a second end portion,

and a compliant portion, deformable between a compressed position and a decompressed position. While Figures 21 and 22 do not specifically illustrate that “the first end portion is biased into physical engagement with the substrate to form an electrical connection with the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection,” that is because Figures 21 and 22 illustrate only the conductive element, with the other structure of Figures 9-11 omitted for the sake of clarity of illustration. As discussed in the application, the embodiments of Figures 21 and 22 are for use in making electrical connections to at least one substrate, such as in the power module illustrated in Figures 9-11. Thus, claim 1 clearly reads on the embodiments of Figures 21 and 22.

Further, Figures 23 and 24 also show a conductive element comprising a first end portion for forming an electrical connection with a substrate, a second end portion, and a compliant portion, deformable between a compressed position and a decompressed position. While Figures 23 and 24 do not specifically illustrate that “the first end portion is biased into physical engagement with the substrate to form an electrical connection with the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection,” that is because Figures 23 and 24 illustrate only the conductive element, with the other structure of Figures 9-11 omitted for the sake of clarity of illustration. As discussed in the application, the embodiments of Figures 23 and 24 are for use in making electrical connections to at least one substrate, such as in the power module illustrated in Figures 9-11. Thus, claim 1 clearly reads on the embodiments of Figures 23 and 24.

Claim 4 is Generic

Claim 4 is dependent on claim 1 and further recites “wherein the compliant portion is curved.” Claim 4 clearly reads on the embodiments of both Figures 10 and 20, thus is generic to those Figures.

Claim 24 is Generic

Claim 24 recites “a first conductive element comprising: (i) a first end portion for forming an electrical connection with a substrate; (ii) a second end portion; (iii) an

intermediate portion situated between the first and second end portions; and (iv) a compliant portion, deformable between a compressed position and a decompressed position, wherein, when the compliant portion is in the compressed position, the first end portion is biased into physical engagement with the substrate to form an electrical connection with a first contact on the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection” and “a second conductive element comprising: (i) a first end portion for forming an electrical connection with a substrate; (ii) a second end portion; (iii) an intermediate portion situated between the first and second end portions; and (iv) a compliant portion, deformable between a compressed position and a decompressed position, wherein, when the compliant portion is in the compressed position, the first end portion is biased into physical engagement with the substrate to form an electrical connection with a first contact on the substrate and the second end portion is unbiased and electrically couplable to form a non-pressure engagement electrical connection” “wherein the intermediate portions of the first and second conductive elements form positive and negative DC conductor bus plates, respectively, and are substantially parallel to, and separated from, each other.”

Claim 24 clearly reads on Figures 9, 11 and 19, and thus claim 24 is generic to these Figures.

Claim 29 is Generic

Claim 29 recites “conductive element comprising: a first end portion for forming an electrical connection with a first contact on a substrate; a second end portion for forming an electrical connection with a second contact on the substrate; an intermediate portion situated between the first and second end portions; and two compliant portions, each deformable between a compressed position and a decompressed position, wherein, when the compliant portions are in the compressed position, the first end portion is biased into physical engagement with the substrate to form an electrical connection with the first contact and the second end portion is biased into physical engagement with the substrate to form an electrical connection with the second contact.”

Claim 29 clearly reads on each of Figures 10 and 20, and thus is generic to those Figures.

Claim 33 is Generic

Claim 33 is dependent on claim 29 and further recites "wherein the compliant portions are curved." Claim 33 clearly reads on the embodiments of both Figures 10 and 20, thus is generic to those Figures.

The Examiner Has Not Met His Initial Burden.

It is further noted that the *burden* is on the Examiner to provide *reasonable* examples that recite *material differences*. MPEP 806.05(e). While some of the Figures may show different embodiments, there are *generic* claims that read on all illustrated embodiments. The Examiner has simply referred to the Figures without any providing any examples that recite material differences with respect to various the claims. Thus, the Examiner has not met the initial burden and the restriction requirement must be either withdrawn or supported with reasonable examples. MPEP 806.05(e).

The Claims Are So Related As To Present No Serious Burden To The Examiner.

Further, the Examiner has failed to identify why examining the entire application would present a *serious burden*, as expressly required by the MPEP. Each of the embodiments disclosed in Figures 9-11 and 19-24 was presented in the application as originally filed. The Examiner has already searched each of these embodiments, and examined them by way of the first Office Action (mailed January 13, 2003). In light of such, it appears unsupportable to now contend that examining the entire application would present a serious burden to the Examiner, as required by the MPEP in order to enter a restriction.

At the very least, Applicants' Attorney is unable to discern how searching the embodiments of Figures 9, 11 and 19, and examining the claims reading on those Figures would present a *serious burden* to the Examiner, since Figures 9, 11 and 19 disclose identical embodiments.

Further, once a generic claim is found to be allowable, the Examiner must also examine the species claims. As discussed above, the application as filed has a number of generic claims, suggesting that a single search and examination of all species would be appropriate as being the most time efficient.

Summary

In making the above arguments, Applicants do not admit that the any of the independent claims are obvious in light of one another. In light of the foregoing remarks, Applicants respectfully request that the Restriction Requirement be withdrawn and all pending claims examined.

Respectfully submitted,

Scott Parkhill et al.

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	First Named Inventor	Scott Parkhill
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	Examiner Name	Hae M. Hyeon
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ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment/Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement; Form PTO-1449 <input type="checkbox"/> Cited References <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts under 37 C.F.R. 1.52 or 1.53 <input type="checkbox"/> Response to Missing Parts/Incomplete Application	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Request for Corrected Filing Receipt <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation, Change of Correspondence Address <input type="checkbox"/> Declaration <input type="checkbox"/> Statement under 37 CFR 3.73(b) <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund	<input type="checkbox"/> CD(s), Number of CD(s) _____ <input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (<i>Appeal Notice, Brief, Reply Brief</i>) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Return Receipt Postcard <input type="checkbox"/> Additional Enclosure(s) (<i>please identify below</i>) _____ _____ _____
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Date	August 6, 2003	

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